Arizona Transportation Research Center



Newsletter July 2007

RECENTLY PUBLISHED RESEARCH REPORTS

SPR-594, Flat-Tailed Horned Lizard Highway Crossing Study

The flat-tailed horned lizard (Phrynosoma mcallii) occupies a restricted range in the Lower Sonoran Desert of southwest Arizona, southeast California, and adjacent land in Mexico. Because they exhibit behavior patterns that include basking and remaining motionless when danger approaches, flat-tailed horned lizards are particularly susceptible to mortality on roads. More importantly, highways fragment areas of habitat and isolate segments of

lizard populations. Depending on the size of the isolated habitat patches, these populations may be non-viable without connections to the larger population. This study evaluated the propensity for flat-tailed horned lizards to use culverts as road crossing structures to avoid vehicle-caused mortality. The research indicated a preferred culvert size for crossing structures. The study also identified installation and maintenance considerations with respect to the lizard.

For additional information about this study contact the project manager, Tom Kombe, tel: 602-7112-3134, email: ekmobe@azdot.gov



Flat-tailed horned lizard with a radio telemetry transmitter attached.

SPR-579, *Making a Good First Impression: Improving PreDesign and Environmental Public Information* Public participation and public involvement are critical to the Arizona Department of Transportation (ADOT). This study analyzed existing data and developed recommendations aimed at improving the ADOT public information and public involvement structures and functions. The recommendations from the study include:

- Improve project level and department level funding for public communications.
- Increase use of the Internet.
- Increase cultural competence with Indian tribes.
- Establish global and local performance measures.
- Provide technical training to Communication & Community Partnerships (CCP) staff.
- Provide communication training to non-CCP staff.
- Increase CCP's responsiveness.
- Decentralize CCP staff.

For additional information about this study contact the project manager, John Semmens, tel: 602-712-3137; email: jsemmens@azdot.gov

COMPLETED PROJECT REPORTS

All recent published reports and many archival reports are available online at:

www.azdot.gov/TPD/ATRC/Publications/project_report s/index.asp

ATRC LIBRARY

ATRC library information, including the library catalogue, is available online at:

www.azdot.gov/TPD/ATRC/library/index.asp

SMALL BUDGET PROGRAM

One small budget project was added to the research program during the last calendar quarter. Project SPR-642, *Delivery of a Technical Curriculum Using Learner-Based Instruction and Communication Modalities in a Distributed Environment*, was approved by the Research Council. With a budget of \$24,000, the project will explore systems that improve critical training of Motor Vehicle Division customer services representatives.

TRQS PROGRAM

Two new TRQS (Transportation Research Quick Study) projects have been approved. TRQS projects provide up to \$5,000 to perform a small study or portion of a larger study. Project TRQS-04, Data Collection Software Used By Law Enforcement Agencies in Arizona will compare data collection software used by law enforcement agencies in Arizona and provide criteria and recommendations on the selection of data collection software to use for Arizona's law enforcement agencies. Project TRQS-05, Approach to Involving Local & Regional Entities in the Highway Safety Improvement Program (HSIP) Process, will define ADOT's current process involving local and regional entities in the Hazard Elimination System (HES) program, review local and regional participation requirements of SAFETEA-LU for the Highway Safety Improvement Program (HSIP), and provide recommendations on how local and regional entities would be involved in the HSIP process.

ATRC Staff

Frank Darmiento, M.S.E., P.E. –
Manager
PROJECT MANAGERS
Christ Dimitroplos, P.E.
Jason Harris, P.E.
Tom Kombe, Ph.D., P.E.
Steve Owen, P.E.
John Semmens, M.A., MBA
Dale Steele, M.A., M.L.S. – Librarian
Christopher Gass, B.S. – Data
Technician
Jeremy Sala – Engineering Assistant



Bald eagle with chicks

Contact:

Frank T. Darmiento, P.E. Telephone: (602) 712-3134 Fax: (602) 712-3400 fdarmiento@azdot.gov

ARIZONA TRANSPORTATION RESEARCH CENTER 2739 E. Washington St., Mail Drop 075R Phoenix AZ 85034-1422

www.azdot.gov/tpd/atrc/index.asp

MISSION: The ATRC mission is to pursue and share knowledge in transportation systems and programs.